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ABSTRACT

Three hypotheses were tested regarding the attribution of causation for successful behavior by kindergarten children: (1) self concept--children with high self esteem make internal attributions and those with low self esteem make external attributions; (2) locus of control (LOC)--children with internal LOC make internal attributions and those with external LOC make external attributions; and (3) attribution theory, self-serving bias approach--successful performance leads to internal attributions. Coopersmith and Gilbert's Behavioral Academic Self Esteem (BASE) rating scale measured self concept, and the Stanford Preschool Internal-External Scale (SPIES) assessed LOC in 43 kindergarten children. Teachers completed the BASE to compare self concept and self attribution. The children completed the 14-item SPIES. They completed a wooden puzzle and gave an explanation for their performance, indicating self-attribution. Preliminary analysis yielded no sex differences. Hypothesis 3 was clearly supported; following successful performance, 35 subjects made internal attributions and six made external attributions. As for hypothesis 2, no relationship was found between LOC and attribution. Hypothesis 1 was not supported; self concept did not differentiate the attributions. There was no significant correlation between BASE and SPIES scores. Neither self concept nor LOC, either singly or together, were significant predictors of attributions. (GDC)

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ATTRIBUTION OF CAUSALITY FOR SUCCESSFUL PERFORMANCE BY KINDERGARTEN CHILDREN

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ATTRIBUTION OF CAUSALITY FOR SUCCESSFUL PERFORMANCE
BY KINDERGARTEN CHILDREN

The works of Heider (1958), Rotter (1966), and Weiner, et al. (1971) have provided bases for intensive interest and research on attribution of causality. While subjects in studies of attribution have represented a range of ages, most subjects have been adults -- the ubiquitous college sophomore or other adults. Some studies have focused on the younger subject; these have focused not so much on the dimensions of attribution, but on bases for an attribution -- such as contiguous actions of A and B (Olum, 1956), use of the principle of covariation (Siegler & Liebert, 1974, Mendlson & Schultz, 1976), and distinctiveness (DiVitto & McArthur, 1978). The major dimensions of attribution hypothesized by Weiner (1979) have rarely been studied among younger subjects. Kindergarten or pre-school age youngsters have been studied sparingly and a paucity of research is noted on developmental changes in attribution if such changes do occur.

In attribution studies, a significant methodological aspect is that of self-attribution vs. attribution about hypothetical others as described, for example, by Marsh, et al. (1984). These have been considered as the "dispositional" -- "situational" approaches (respectively). Most research has focused on the latter procedure. The most likely task for the subject has been that of making an attribution with respect to some performance by a hypothetical other person. Also, when subjects have been asked to make self-attributions, the experimental task may be highly structured and artificial, hence providing a poor basis for generalizing results to other, more common tasks. These lines of research suggest a need for more study on self-attribution in more naturalistic settings.

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The present research project is directed towards self-attribution in a naturalistic setting with kindergarten children. A basic dimension of attribution (Weiner, et al., 1971; Weiner, 1979) is that of internal-external attribution. This dimension has been described as most appropriate in achievement settings, and some kindergarten activities fit this orientation. Further, the internal-external dimension should show some logical and/or empirical relationship to locus of control (Crandall, Katovsky, Preston, 1965; Rotter, 1969; Mischel, Zeiss & Zeiss, 1974). In educational settings, the importance of self-concept (self-esteem, etc.) has been recognized as significantly impacting a variety of behaviors [see reviews by Wylie (1961) and Purkey (1970)]. Included among such self-concept -- other behavior relationships may be attribution of causality. That is, developmental difference in self-concept (both within a given individual and among various persons) may affect attributions made.

At least in theory locus of control measures should correspond with internal-external attributions. That is, internal locus of control should lead to internal attribution and external locus of control should lead to external attributions. Indeed, Brown, et al. (1984) found that internally controlled persons took responsibility for positive events. Frieze and Snyder (1980) found that external causes were used more for failure than for success. The consistency of the locus of control-attribution relationship has been called into question by Marsh, et al. (1984) whose results argue against the adequacy of the internal-external dimension; also their findings based on a situational approach differed from those resulting from a dispositional approach.

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The influence of self-concept has been hypothesized to affect attribution and to interact with locus of control. Johnson (1981) found that children with low self-concept made internal attribution for failure and external attribution for success. Nichols (1978) found that children with high self-concepts made internal attribution for success and attributions for failure were external or unstable internal. Marsh (1984) found that students who attribute success to ability and effort (internal) and who do not make internal attribution for failure had better academic self-concepts. Brown, et al. (1984) were unable to draw conclusion on the interrelationship between locus of control and self-concept and suggested that future research focus on this. A preponderance of research appears consistent that, particularly in successful performance, internal attributions are associated with high self-concept. This reflects the "halo scheme" (Kun, 1977) that all good things go together.

The literature on attribution theory provides a third, more direct, basis for predicting attribution. The general case has been labelled the "fundamental attribution error," a tendency to over-attribute to internal causes. The differentiated case, the "self-serving bias" or "hedonic bias" (Heider, 1958; Marsh, et al., 1984) involves attribution of (personal) success to internal causes and failure to external causes. The latter instance would reflect an attempt to protect or enhance self-esteem. Particularly in the case of dispositional attribution for success, one would expect internality.

Young children are sometimes described as "egocentric." Whether such egocentrism stems from a high self-concept or a self-serving bias is unclear. The nature of attributions made could lend some clarification. If egocentric functioning is unrelated to self-concept, attributions should be unrelated to self-concept; if egocentric functioning is dependent on self-concept

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development (or lack of it), attributions should be related to self-concept. Are young children subject to a self-serving bias, or does egocentrism override? This could be addressed in a success-failure groups comparison. If, even in youngster, a self-serving bias is present, dispositional attributions for success and for failure should appear. (This latter aspect is not addressed in this study.)

This study was a pilot, methodological one with respect to studying attribution of causality in kindergarten youngster and for providing a base for both cross-sectional and longitudinal study of attribution in children. Specifically we tested three related hypotheses about attribution of causation for successful behavior:

1. A self-concept approach: The research hypothesis was that youngsters with high self-concepts would make internal attributions and those with low self-concepts would make external attributions.
2. A locus of control approach: The research hypothesis was that youngsters with internal locus of control would make internal attributions and those with external locus of control would make external attributions.
3. An attribution theory, self-serving bias approach: The research hypothesis was that successful performance would lead to internal attributions.

In studies of this nature, a significant consideration is that of the measures used. For example, how does one measure self-concept, locus of control, etc. for 5-year-olds? We used measures with some history of use and some reliability and validity data. While they may be less than optimally desirable, these instruments have been used and we chose to focus on issues other than measurement ones. Clearly, measures appropriate for children are

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in short supply. Further, the desirable psychometric properties of instruments seems inversely related to the age of respondent during the formative years (Anastasi, 1961, Chap. 11).

Method

Instruments

As a measure of self-concept we used the Behavioral Academic Self-Esteem: A Rating Scale (BASE) (Coopersmith & Gilbert, 1982). To measure locus of control we used the Stanford Preschool Internal-External Scale (SPIES) (Mischel, Zeiss, & Zeiss, 1974). Descriptions and properties of these instruments will not be reviewed here but may be found in the references cited. The BASE provided the self-concept measure. The BASE yield a total self-concept score along with five subscales: Student Initiative, Social Attention, Success/Failure, Social Attraction, and Self-Confidence. The locus of control measure was the SPIES. To define the internally- and externally-controlled groups the median score was determined (7, rounded) and scores above the interval containing the median (7) were considered internally-controlled and others as externally controlled (a conservative measure of internal control). To ascertain the subjects' attribution for the successful performance, each subject was asked to give a free response to a question about why she or he thought the performance was as good as it was. The statements were listed and given to a set of five judges who made independent judgments of whether each attribution statement reflected internal or external control. Interrater reliability exceeded .90.

Subjects

The subjects were children attending public kindergarten. Three classes were chosen by the Kindergarten Center Principal for participation. Each class had approximately twenty students. On test dates, a total of

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forty-three children with parental permission were present. Of the forty-three children, twenty were girls and twenty-three were boys.

Procedure

The first step was to obtain permission from the superintendent and from the Kindergarten Center Principal. Parents in the identified classes were asked to sign letters of permission. A brief explanation of the project was provided in written form for parents.

Date obtained for use in the study was derived from three sources. The BASE, a self-concept measure was completed by the students' classroom teachers prior to testing dates. The purpose of the BASE was to determine if a difference or relationship existed between self-concept and self-attribution. The remaining two measures were obtained from the children. An activity designed to elicit self-attribution for its successful completion of a task was used. This activity consisted of an eight piece wooden puzzle which the children were asked to put together, and then asked to give a verbal explanation for their performance. The finial source of data was the SPIES which consists of fourteen forced-choice questions which identify internal or external control.

The testing of the children, consisting of the puzzle-task and the SPIES, was conducted by two females. Children entered the library, which was the testing site, in pairs. The puzzle-activity was first. After each tester introduced herself to the children, the children were directed to look at the puzzle. The puzzle was then taken apart and the children were asked to put it back together. After a two-minute time period, each child's progress was

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stopped. At this point, children were told they had done well for the amount of time provided. Next the children were asked to explain why they did so well. The purpose of this question was to determine self-attribution of their successful completion of the puzzle. Their response was recorded exactly as spoken.

The second test conducted with the children was the SPIES which was administered orally. The children were told they were going to play a question and answer game. Children were read a question and its' two possible responses and were instructed to identify the one response which was right for them. As this was completed, the children were thanked and they returned to their room.

Results

Both male and female students were used in the study. Preliminary analysis yielded no gender differences on any of the BASE or SPIES measures. Both gender groups were collapsed into one for further analyses.

To test the self-serving bias/attribution theory hypothesis, a simple Chi-square analysis was performed. Following the successful performance thirty-five subjects made internal attribution and six made external attributions. The resulting χ^2 (with Yates' correction for continuity) was 18.56 ($p<.001$). Clearly the research hypothesis was supported.

To test the locus of control hypothesis, a 2 x 2 contingency table (I - E control x I - E attribution) computation was carried out. The resulting phi coefficient was .007, indicating no relationship between locus of control and attribution. Hence, no support was shown for an association between I - E control and attribution made.

To test the self-concept hypothesis a t-test analysis was used (I - E attribution groups comparison on total self-concept as well as on each subscale of the BASE). None of the t-values were statistically significant, indicating that self-concept did not differentiate the attributions made.

Beyond the preceding, a correlation matrix was generated for the SPIES and the six BASE scores. No statistically significant correlation coefficients appeared. The highest correlation coefficient was between the SPIES and the BASE Self-Confidence, a - .23 (p=.14). Also, neither analysis of variance nor regression analysis suggested that self-concept nor locus of control, either singly or together, were significant predictors of the attribution made by the subjects.

Discussion

Of the three research hypotheses tested, the self-serving bias/attribution theory one was the only one supported. A major issue that could be raised is whether the youngsters would also made internal attributions for performance that was not so clearly successful. We plan to address this in an on-going study.

In view of the popular emphasis on the importance of self-concept and self-concept development in children, the lack of support for a self-concept -- attribution difference or relationship was somewhat surprising. One might speculate that the developing self-concept for 5-year-olds is not yet differentiated with respect to behaviors such as success or lack of it. Some studies have also shown that some high self-concept individuals are less likely than low self-concept individuals to make internal attributions for performance, and a balancing effect among subjects among groups could account for lack of differences.

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The locus of control measure was also unrelated to attributions make. The SPIES total score was used in analyses; this total score is the sum of subscores for control over positive events and for control over negative events. These subscores may be significant. Since the subscores are derived from a small number of items (and consequently, scores are small) we decided in advance to focus only on total scores.

In considering the relationship between self-concept and locus of control, the correlational analysis showed no statistically significant coefficients. As mentioned above, the correlation coefficient between locus of control scores and the Self-confidence subscale was -.23 (p-.14). The inference here is that as self-confidence increases, one is more externally controlled. This may reflect ambivalence with respect to the youngsters' perception of their power and influence; their certainly may be in the events that are perceived as under the control of powerful others (e.g., parents and teachers).

Further study is planned to clarify some measurement issues and to investigate attributions under varying levels of performance. We also plan to do comparisons of youngsters at different age/grade levels.

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